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Trust Formation in information system

Trust formation in information systems implementation in developing countries: The role of emancipatory expectations

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Abstract

This paper explores trust formation issues in information and communications technology projects in developing countries. My purpose in this study is to understand the stakeholder expectations in the implementation of information and communications technology for development projects (ICT4D). For this I study the computerization of a state agricultural marketing board in India. The board initiated the project in 2003 and by 2011-12, after massive investments, the project was abandoned. I started following this project in 2009, and collected data from the major stakeholder groups in form of semi structured interviews over a three year period. The data was analysed using thematic analysis and my overall approach is critical. It is suggested that expectations of emancipation should be satisfied along physical, social and informational dimensions.

Keywords: Trust, Agriculture, Information Systems, Developing Countries.

INTRODUCTION

Information and Communications Technology for Development (ICT4D) projects serve emancipatory functions (Kanungo 2004). Impact assessment studies of such systems measure the emancipation in form of benefits arising from information emancipation. For example, studies measure the reductions in the cost of accessing the services, improvement in the quality of governance and estimate the reduction in corruption (Bhatnagar 2007). On the other hand, the beneficiaries of such projects view the information systems implementation as a developmental intervention. They expect that the focus of the project is their amelioration. This suggests that an integrated view of emancipation is needed, one that transcends information emancipation.

The emancipatory theory of trust conceptualises trust as a “booster” that helps people to explore new opportunities by emancipating them from their commitment relations (Yamagishi et al., 1999). According to this theory, commitment formation is a means of countering social uncertainty. However, one drawback of commitment formation is that the actors are restrained from exploring outside opportunities. If outside opportunities are frequent, commitments become a liability. In such situations, trust plays an emancipatory role and emancipates actors from confining themselves to commitment relationships. According to the theory, in situations of social uncertainty the bias toward the goodwill and benign intentions represents trust. In other words, a high trusting person will have a greater belief that the intentions of the other party are benign. On the other hand, when there is no such uncertainty, what is called as trust is merely assurance or confidence. Other researchers have suggested that trust expectations include other dimensions. For example, Baba (1999) and Schoorman, Mayer, & Davis (2007) mention that expectations have affective as well as cognitive dimensions. Sztompka (1999) describes trust expectations as fiduciary, axiological or instrumental.

I argue that emancipatory information systems will need to have an integrated view of emancipation that has physical, social and informational dimensions. Absence of an integrated view, as is shown by the results, can have disastrous impact on trust levels between the stakeholders. Specifically, I answer the question: what are the expectations related to trust formation during IS implementation in developing countries.

To answer this question I look at a public sector organization in India. The organization is a state level agricultural marketing board that provides common meeting platforms across (yards) the state. At these yards farmers and traders accumulate for trade transactions. Often there may be price dispersions across the yards and

the farmers may be exploited by the traders. To avoid such discrepancies arising from the manual system, the organization initiated an information systems project in 2003. There are four major stakeholders namely farmers, traders, government and private partner organization implementing the project.

The remaining paper is presented as under. In section two I review the literature on trust formation. This is followed by a description of the research method. In section four I present the theoretical framework based on Bourdieu's theory of practices (Bourdieu 1977). In section five the case is discussed. This is followed by an analysis. Lastly, the conclusions are presented.

LITERATURE REVIEW

The objective of this literature review was to gain an understanding of the expectations related to trust formation. Before detailing the literature review, I want to clarify the type of trust that is focus of this study. Researchers have discussed different types of trust. For example, on the basis of unit of analysis trust can be interpersonal, organizational or group based trust (Camén et al. 2011). On the basis of the expectations that it serves trust can be fiduciary, axiological or instrumental (Baba 1999). Researchers have suggested that amidst the vast array of trust types, *interpersonal trust* stands at the core of all trust types (Schoorman et al. 2007; Williams 2005). Following this, I limit the discussion to trust formation amongst individuals and choose the definition proposed by Mayer et al (Mayer et al. 1995) as other definitions are variants to this (Fichman 2003). According to this definition trust is the "the willingness of a party to be vulnerable to the actions of another party based on the expectation that the other will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party".

Methodology

For selecting the literature, I follow the approach described by Barroso et al. (2003). I started building the data corpus on the basis of number of citations in the bibliographic databases, and this was followed by citation searching, journal runs and author search. The data corpus comprised of 46 research articles covering a period of 1995 till 2011. The literature review is limited to three disciplines namely of psychology, management and information technology studies. Initially, I decided to look at a ten year period from 1999 to 2009. However, this was later extended to cover more recent studies from 2010 and 2011. Also, I decided to include the seminal study by Mayer et al. (1995) as it was highly cited both within information systems as well as other studies.

In the initial stage, I coded the research articles to identify the main research themes on trust. In the next stage, I selected one of these themes namely, "how is trust formed" and arranged the codes on trust formation on the basis of the year of publication. I rearranged 204 codes covering a period of 1995 to 2011. By doing so I was able to arrange the codes on the basis of the year of study. Next, following the guidelines of constant comparison method (Boeije 2002) I started writing a memo summary for each time period. I wrote memo summaries for twelve time period describing the key deliberations of the period. I divided these time periods in three periods representing the early, intermediate and recent research phases. The memos of each year within each phase were compared with other to have an overarching theme for the period. In the final phase, I compared the deliberations of the three periods to draw on the conclusions.

Results

Initial Phase (1995 – 2003)

Studies in the initial phase discuss the role of culture on propensity to trust. Trust is described as an important strategy for countering social uncertainty, and is related to the individual's risk taking abilities. Culture plays an important role in shaping these abilities. For example, (Mayer et al. 1995) suggest that people in some eastern countries' cultures are averse to risk taking, and have lower levels of trust compared to their western counterparts. Fichman (2003) argues that social structure influence trusting propensities and high trust societies are marked by late marriages, and nuclear families. On the other hand, low trust societies are characterised by early marriages, and strong bonds of association with the extended families.

Researchers in the initial phase also discuss the expectations related to trust formation. Quoting studies from psychology, (Baba 1999) concludes that distrust becomes a chosen strategy when there is expectation of selfish behaviour from others. Yamagishi et al. (1999) suggests that people with high level of trust have a higher belief in human benevolence. Other researchers have highlighted the importance of benevolence, and have argued that reciprocation of benevolence is important for securing cooperation in human societies. Kiyonari et al. (2000) quotes biological studies to suggest that self-interested organisms use reciprocal benevolence as a strategy to

secure cooperation. The author further quotes various studies to suggest that humans have developed cognitive modules for differentiating people on the basis of their willingness to cooperate, and people with high social heuristic can differentiate co-operators from defectors. Fichman (2003) also suggests that cognitive ability to detect untrustworthy behaviour is an important qualification in trust decisions. Others have suggested that different types of reciprocation result in different levels of trust (Baba 1999). Thus expectations of benevolence are important expectations in trust formation.

Intermediate Phase

The analysis suggests that studies in the intermediate phase do not focus on the expectations in trust decisions. Culture continues to be the focus of trust studies in this phase and the researchers move a step beyond the mere suggestion that culture impacts the propensity to trust. Siala et al. (2004) suggest that culture is an antecedent to trust. Culture presupposes a shared value system which has a bearing on the propensity to trust (Lander et al. 2004). Cultural similarities yield higher levels of commitment amongst the group members, resulting in higher levels of trust. Following this, Yosano et al. (2005) study the relationship between commitment formation and trust. They study trust formation across two groups of people with high (rural) and low commitment relations (urban). They find an insignificant difference across these two groups suggesting that within group commitment may not bear a relationship with trust formation. Kiyonari et al. (2006) explains that one reason for the variation in the propensity to trust across culture is that the propensity to reciprocate itself varies across cultures. Cook et al. (2005) suggests that the risk taking abilities vary across cultures and so does the propensity to trust. Schoorman et al. (2007) suggest that benevolence is a vital requirement for trust formation and culture plays an important role in shaping the perceptions about benevolence. The authors suggest that the masculine culture (Hofstede 1980) put a greater emphasis on ability, while the feminine cultures stress on benevolence.

Amongst the factors that influence trust formation, Jarvenpaa et al. (2004) suggests that optimum levels of communication have a positive impact on trust formation. The study by the authors suggests that early communication has a positive relationship with trust formation. However, as communication increases the relationship reverses implying that both low and high levels of communication have a negative impact on trust formation. Diallo et al. (2005) study the relationship between communication, trust and success of developmental projects in Africa. Their findings suggest that the impact of frequent communication on trust varies with the organizational hierarchy.

Studies in the intermediate phase present the ability to assess trustworthiness as an important ability in trust decisions. Jarvenpaa et al. (2004) suggests that individuals' ability to assess the trustworthiness is a matter of disposition and the cognitive abilities. It is more of an attribute of the trustor rather than being an assessment of the behaviour of trustee. Kiyonari et al. (2006) differentiates between trust and trustworthiness to suggest that act of putting trust does not necessarily makes other party trustworthy. Quoting various studies the authors suggest those countries that are high on levels of trust (i.e. higher propensity to put trust), may be often low on trustworthiness. One important research gap identified in the intermediate phase is that the expectations of benevolence have not received adequate research attention (Schoorman et al. 2007).

Recent Phase

The review of the recent phase indicates a gradual shift towards the normative elements of trust formation, though culture-trust relationships continue to interest the researchers (Igarashi et al. 2008). Foddy et al. (2009) mention that expectations of altruism play an important role in trust formation within the group members, and when such expectations are met the group members often ignore the stereotyped knowledge about the group members. Song (2009) studies the impact of group membership on the expectations of reciprocity and trust formation. The findings suggest that expectations of reciprocity play an important role in trust formation across both individual and group settings. Rice et al. (2010) uses Immanuel Kant's framework of perfect and imperfect duties to study trust formation. Honesty, for example, is described as a perfect duty of all human beings while charity is an imperfect duty. Through a series of experiments, the author demonstrates that even mild violations of perfect duties have a disastrous impact of trust formation. Parra et al. (2011) also highlight the role of individual ethics in trust formation and consider ethics as an important element of trust formation apart from ability and benevolence. Other studies have also highlighted the normative elements of trust formation (Knoll et al. 2011).

The analysis of the three phases suggests that expectations of benevolence play an important role in trust formation. In ICT4D projects, such expectations become much more pronounced because the project objective is to emancipate the stakeholder groups from their prevailing state of socio-economic depravity. How far the availability of information alone is able to address such expectations is an interesting question.

RESEARCH METHOD

The purpose in this paper is to understand the trust formation expectations. Such expectations can be well studied within the socio-cultural context. A qualitative approach was well suited for studying the research question as qualitative research does not require the fixation of variables a priori (Cavaye 1996). Also, a qualitative approach provides flexibility to capture the contextual influences on the phenomenon (Myers 2009). In qualitative approach, my epistemological stance is critical (Myers et al. 2011). I have chosen a critical approach as it is based on the fundamental notion of critical reflection. It provides an opportunity to critically reflect on the existing expectations of trust formation. Furthermore, it suited well with data analysis approach which used a constant comparison method (Boeije 2002). I chose an “intrinsic case study” (Creswell et al. 2007) with an inductive approach.

ICT4D researchers have suggested that identification of stakeholder is in itself a major challenge in stakeholder based studies and I use the *importance-influence* criterion for the identification of primary stakeholder (Bailur 2007). Various yard based studies have suggested that farmers, traders and government officers are the *important* stakeholders in the yards (Meenakshi et al. 2005). Of these traders are the most *influential* stakeholder group (Goyal 2010 ; Molony 2008). Research studies have also shown that the role of private partner i.e. private vendors implementing the information system is critical to the successful implementation of ICT projects (Best et al. 2008; Cecchini et al. 2004). Following this the primary stakeholders include *farmers, traders, government officers and private partners*.

The data for the present study was collected over a period of eight months (2009, 2010 and 2012) through semi structured interviews, observations, field notes and government records. Overall twenty three informants were interviewed comprising of farmers, government employees, private partners (PP) implementing the information systems and traders. Table 1 presents the distribution of interviews:

Table 1: Interviews with stakeholders

Stakeholder	Interviews
Government Employees	8
Private Partners	5
Traders	3
Farmers	7

Both employees and PP were interviewed from various levels of organizational hierarchy. Farmers and traders who had come for trade at the yards were contacted and were interviewed both at the yards and the respective villages. These interviews and field visits were carried out at four different yards in the state. The interviews lasted from between 30 minutes to 2 hours and were conducted in the local language. The interviews with the farmers were recorded while notes were taken for the interviews with other stakeholders. The recorded interviews with the farmers were transcribed. The transcripts and field notes together formed the data corpus that was analysed with N Vivo software.

For the identification of the themes, I used Constant Comparative Method (Boeije, 2002). Following this, I first generated a summary for each interview. Next, I started with initial coding of each interview transcripts. I then compared the initial codes for each interview with the overall interview summary and accordingly refined the interview summary. This ensured a consistency between the codes and the interview summary. In the next step, I looked at the interview summaries within each stakeholder group. For example, the summarised farmer interviews were all compared with each other to have an overarching theme relationship for the farmer group. Through this comparison, I developed a construct relationship for each stakeholder group namely farmer, trader, government officer and private partner. In the final step, I compared these four theme relationships amongst themselves.

For establishing the validity of the findings, I travelled to India in 2012 and discussed the findings with the stakeholders. The stakeholders agreed to the presence of high levels of trust deficit amongst the stakeholders. The private partners were not available for discussions as their offices were closed down and their property seized following conflicts with the government. The government officers mentioned that the information

systems projects has been abandoned as the private partners had failed to fulfilled their contractual obligations.

THEORETICAL FRAMEWORK

The study involved four major stakeholder groups. These stakeholder groups interact with each other for trading agricultural commodities, and their interests are conflicting. For example, the farmers want to maximise their earnings, while the traders want to offer the lowest prices to the farmers. In the choice of theoretical framework, I was looking for a theory that explains the struggle over resources amongst the competing stakeholders. I believe that Pierre Bourdieu's theory of practices met this requirement very well. The theory was well grounded in the data because of its emphasis on *stakeholder practices*. The concept of *habitus*, accounted for the contextual influences on stakeholder practices. Finally, the concept of *field* represented the social spaces where stakeholders struggled to maximise their *capital*. Moreover, the theory has been used in past IS research involving different stakeholders (for example, Levina et al. 2005). These conceptual elements matched the research very well. In the section below, I briefly review the theoretical concepts of theory of practices.

Theory of Practices: Conceptual Elements

According to Bourdieu, agents struggle over three types of capital namely, cultural, economic and symbolic capital. The volume and composition of capital and the social trajectory of agents together, impact the practices of agents. However, this relationship is mediated by the *Habitus* of the agents. *Habitus* is the term used by Bourdieu that refers to the subtle but strongly ingrained factors that shape the actions of agents, especially in situations where the rules of behaviour are not explicit (Swartz 1997). The *habitus* links the behaviour of agents with their class status. The *habitus* of agents develops a certain liking or disliking in them, for tastes that are suited to their class. In situations in which tastes or dispositions other than those possessed by the agents are appreciated, the agents feel misplaced. With the given *habitus*, the agents enter their *fields* of struggle (such as fields of their profession) to exchange or acquire the capital in order to improve their positions in the social space.

Fields represent the social space where agents struggle for acquiring the capital (Jenkins 1992). It is in these *fields* that stakeholders exchange their capital and interact with each other. *Fields* are not only the arena of struggle over resources, but more importantly they are also the arenas of struggle for legitimization of practices (Swartz 1997). The composition and volume of capital possessed, determine the location of the agents in the fields. The interactions between *habitus*, *field* and the *capital*, yield the practices of agents. This relationship is described by Bourdieu in form of formula (Bourdieu 1984 p. 101) as follows:

$$(\text{habitus})(\text{capital}) + \text{field} = \text{practice}$$

Thus *practices* are shaped by the interactions of agent's *habitus* and his adaptations to the *field* of struggle over capital. The key message that Bourdieu (Bourdieu, 1990) presents is that repeated interactions between the field and habitus provide certain mastery to agents in their practices so that agents themselves may not be conscious of their practices.

Thus *Logic of Practice* suggests the behavioural improvisations that happen over a period of time. Indecision or uncertainty yields delay in the occurrences of events, and gives time to individuals to reflect and improvise their behaviour. Thus, practices are strategic adaptations (Kvasny 2005), which eventually yield the social structures. The social structure then, creates the *habitus* through class and rank classifications.

I use this theory in a limited manner to guide the data collection. The data collection is centred on documenting stakeholder practices. I discussed with the informants their context and their experiences with computerization. From analysis of these discussions, I identified their practices. Overall, I was able to identify over forty stakeholder practices used in the yards. I assume that these practices are an outcome of the socio-cultural context of the stakeholders, and have a direct bearing on the levels of trust. The theoretical model depicting this is presented in figure 1. The two directional arrows in this model suggest the dynamic nature of the constructs. Context yields practices, and the practices have an impact on context. Also, practices influence the trust levels and trust levels influence the practices.

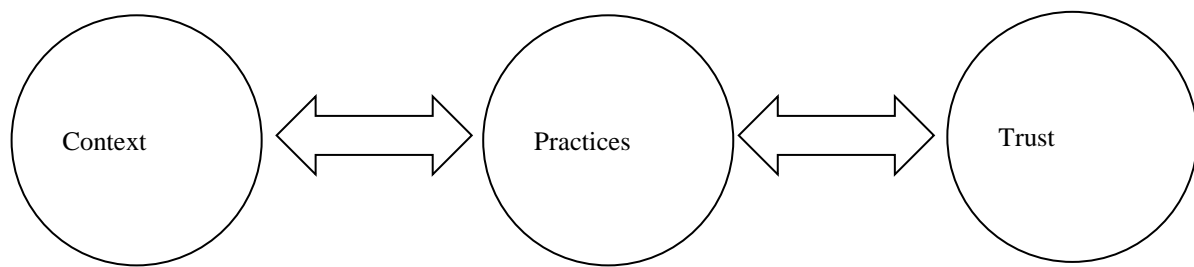


Figure 1: Theoretical model of trust formation

CASE DESCRIPTION

The current study relates to the information system implementation at an agricultural marketing board in one of the Indian states. The total population of the state is over sixty million of which nearly three fourths is rural. The state is one of the largest states of a leading producer of various agricultural commodities in India namely soybeans, grams, oilseeds and pulses.

Agricultural trading in India is guided by the State Agricultural Produce Marketing Committee Act. The act prescribes the creation of market yards across various states. These yards are to be operated by yard committees and the yard committees are controlled by a para-state organization called as the State Agricultural Marketing Board. The act has been adopted by various states at various points of time (Shilpi et al. 2008).

Farmers of the state have various channels to sell their agricultural commodities. For example they may choose to sell the commodities to the local traders, various cooperative procurement organizations or sell the commodities at the market yards through the process of auction. Auction at the yards provides an opportunity to avail better prices as it is mandatory to start the auctions at a minimum support price (MSP) which is recommended by the Indian Commission on Agricultural Costs and Prices (Meenakshi et al. 2005).

Studies indicate that there are large price dispersions across these market yards and often the farmers are not able to realize the best available prices (Goyal 2010). Past studies also indicate that farmers face various kinds of problems in the yards such as cheating in commodity weighing, bearing the cost of commodity bags, lack of information about the commodity prices, delay in the payments, etc. These problems often also have an impact on the socio-psychological well-being of the farmers (Anupindi & Sivakumar, 2007).

Historical Perspective

The exploitation of the farmers as well as a need to regulate the commodity prices resulted in the creation of various para-state organizations called as marketing boards after World War II (Abbott 1967). Perhaps the earliest definition of an agricultural marketing board comes from Abbott (1967) who defines them as “public bodies set up by government action and delegated legal powers of compulsion over producers and handlers of primary or processed agricultural products”. Historically, the agricultural commodity markets were regulated in India through the Bombay Cotton Market Act of 1927. The act mandated the creation of yards where farmers could show their cotton to the traders (Singh 2007). Consequently informal yards were created across the country where the farmers sold their commodities to the traders through commission agents. In the state under study, these yards were completely autonomous bodies. However, in 1972 the state government formulated a law by which all the yards were brought under the aegis of a state level agricultural marketing board.

Process of trade transactions

There are over two hundred yards in the state and there is considerable diversity in the state. As a consequence there are some variations in yard processes. However, prior research studies related to agricultural yards identify certain common processes that are prevalent across all the yards (Kumar 2004). These include commodity auction, its weighing, farmer payments and deposition of the yard service charges by the traders. After the service charge is deposited, the trader is issued a ‘no objection certificate’ by the yard authorities so that the trader can sell or transport the commodities further to industries or exporters.

Problems in manual process

Each of the yard process requires certain documentation. For example, auction slips and weight slips are issued to the farmers and traders. These slips form the basis for calculations of the payable service charges. For such calculations, it is important that the information in each document is consistent. However, manual entry of records often results in inconsistency, and the service charge liabilities of traders could not be correctly determined. The cumulative impact of the manual processes resulted in corruption as well as organizational inefficiency. Also, the farmers could not get the best possible price of their commodities as they had no information of the rates prevailing in other markets. This resulted in their exploitation by the traders. Exploitation of the farmers as well improvement in organizational efficiency provided the overall rationale for initiating the computerization project in 2003.

Computerization of yards

The project aimed at capturing the data of all the processes electronically through computers, hand held electronic terminals and electronic weigh bridges. At each yard the data was uploaded to a central server and was redistributed to various yards, inter-state check posts and the board head office. The data was also displayed on the website of the board. At each computerized yard, the processed data (auction rates, etc) was displayed on TV sets. The project was conceived and executed by the board and a private vendor company. The entire investment on hardware, software, manpower and maintenance has been done by the private vendor, and the vendor was paid a percentage of the total service charges collected.

An evaluation of the project by the government in 2008 indicated that the project was successful in providing timely payments to the farmers, reducing the errors in transactions and providing an overall improved quality of services (DIT 2008p. 92). However field visits starting from 2009 onwards suggested that there were frequent conflicts between the private partners and the government over variety of issues such as incorrect data entry and reconciliations. The government employees blamed the private partners for not fulfilling their contractual obligations and the private partners blamed the government for corruption and inefficiency. In 2011, the conflict surfaced as the government income tax department conducted several raids on the offices of private partners for income tax evasions. By 2012 the project was completely abandoned. The government officers have now hired some private data entry operators to generate the computerised reports of transactions.

CASE ANALYSIS

In this section I present evidence that fulfilment of emancipatory expectations is a core issue for successful implementation of ICT4D projects. Collins English Dictionary ("emancipate," 2000) suggests three meanings of the word 'emancipate'. First, *"to free from restriction or restraint, especially social or legal restraint"*. Second, *"to free from inhibitions imposed by conventional morality"* and third *"to liberate (a slave) from bondage"*. Epistemologically the three dimensions of 'emancipation' are *physical*, *social* or *legal* and *moral*. In this section, I present the evidence related to these three dimensions. There are four primary stakeholders in the case namely farmers, government officers, private partners and traders. The government officers are ridden with organizational problems characterised by rigid bureaucracy, budgetary constraints and lack of adequate manpower. The farmers travel long distance to yards and pass through various cumbersome processes to finally sell their commodities. They have to wait for long hours, sometimes days, in order to receive the payments of the commodities sold. Urgent financial needs force the farmers to sell their commodities in the yards and they are not inclined to negotiations. The traders on the other hand live in the vicinity of yards and are financially secured. The private partners implementing the project are commercial organizations. Their employees are city dwellers and have easy access to yards. Furthermore, there is no financial insecurity with them as they receive a secured performance based salary. Farmers and government officers are two stakeholder groups that face precarious situation. Following this I limit the discussions of emancipatory expectations to these two stakeholder groups.

Physical emancipation refers to the emancipation from the physical problems faced by the stakeholders in the yards. The farmers for example travel long distances to reach the yards. Exhausted farmers expect certain physical care in the yards. One farmer presented the physical problems that they face as under:

"It is our compulsion to come to the yards because there is no other choice. Today I came here around seven o'clock in the morning. I travelled from my village at five o'clock in the morning. A lot of farmers come here in the night. A lot of them start travelling as early as three o'clock in the morning. It becomes too hard for the

farmers as they have to travel early morning or even previous night to be here on time. Those who come here in the night, sleep for the entire night in the open sheds amidst the mosquitoes”.

However, when such expectations are not met over a period of time, a sense of exploitation gets developed in the farmers. Obviously, given an opportunity farmers are not inclined to be fair to the other stakeholders. This impacts the trust levels between the stakeholders.

Emancipatory expectations can also be imagined along the *social* or *legal* dimensions. Yards for example, were completely autonomous in their inception stage. However, prior to computerization, a uniform set of rules and regulations was prescribed by the board. This uniform act could not be implemented in all the yards as each yard had a different auction method which was based on regional and cultural context of the yard. This policy change has created more problems than solutions, though such uniformity was advantageous for computerization as only one software application can be used in all the yards.

According to the Collins dictionary (2000), the third meaning of the word 'emancipate' relates to the expectation of relief from the “*from inhibitions imposed by conventional morality*”. In order to present evidence for this expectation I look at the following two excerpts from two farmers (table 2). The first suggests that given the social context of farmers in India, it is respectable for a farmer to have as much land as possible. Extent of land is proportional to the social esteem of a farmer. The second excerpt suggests that holding high acreage of land is an economically unviable proposition given the current hike in the land prices. Both these excerpts are presented side-by-side in the table 2 below:

Table 2: Comparison of Farmer statements

FARMER 1	FARMER 2
Usually in the cities you have a high esteem if you have a house, but in villages you are valued on the basis of the land that you have. Even if you have a lot of money in your bank but if you are living in a rented house, you are considered as poor. So the villagers look for land...even in marriages we will ask how much land the other people have	The selling prices of land are high in our village. The rate of one acre is around eight million. This is because the village is close to the city. Even in another village, where I have land, the rate of the land is one million per acre. The total worth of our land is around thirty million. If I put this amount in the bank, I can get an interest of 2.5 million a year. But our profit from farming is not even 0.1 million. So if I don't do anything then the bank is willing to pay me an interest of 2.5 million...

Notice here that the first farmer mentions that farmers with higher land ownership enjoy a higher social status in the villages. The statement of the second farmer suggests that, if he sells his land and deposits the sale proceeds in a bank, the interest earned will be more than the earnings from farming. This clearly indicates that farmers often do not sell their lands even when such a sale may be an economically prudent decision. This is because selling land may be considered an immoral decision within their community. The above evidence indicates that stakeholders have emancipatory expectations that can be imagined along the physical, socio-legal and moral dimensions.

Emancipatory information systems have an embedded expectation of emancipation. These expectations are along the physical, social and moral dimensions. In the case of yard, the farmers buy-in in the project implementation was not secured because their expectations of physical relief were not met. They perceived the government as insensitive to their needs. This had a negative impact on the trust levels between these two stakeholders. Similarly, imposing a uniform set of rules and regulations across diverse yards had a negative impact on the trust levels between senior and junior government officers. The junior officers felt that their opinions did not matter to the senior officers. This resulted in a trust loss within the government. One reason for such a situation was that information emancipation was the sole concern of the project. On the other hand, farmers perceived the project as a developmental initiative that would address their expectations. Since their expectations were not met this resulted in trust loss. In a situation of low trust, the stakeholder practices were marked by unfairness towards each other. This again resulted in trust loss, and the ultimate collapse of project. The case study suggests that information emancipation alone is not sufficient for securing the trust levels between stakeholders. It is therefore important that emancipatory information systems are implemented with an integrated view of emancipation expectations.

CONCLUSIONS

Apart from the ISDC projects where importance of trust is highlighted (for example see Abraham, 2007 pp 48,51; Bailur, 2007 pp 75; Plauché & Nallasamy, 2007 pp 72,74), various developmental projects also indicate that success of such projects is linked to the trust relationships between the stakeholders (Diallo et al. 2005). The current study shows that apart from information emancipation, stakeholder expectations have other dimensions. For developing trust relationships between stakeholders, it is important that emancipatory information systems also fulfil the other expectations. In this case for example, farmers expect that after travelling long distances, they should get some basic amenities in the yards. When such expectations are not met, a sense of apathy develops in the stakeholders which results in trust loss. Past studies on trust also indicate that trust formation requires both affective and cognitive elements (Parra et al. 2011; Schoorman et al. 2007). While this study demonstrates that stakeholder expectations are multi-dimensional and not merely informational, this study is limited to the agricultural occupation. Expectations will change with the domain, and other dimensions may emerge apart from the *physical, moral* and social. Further research can be undertaken to suggest a framework for understanding the various expectations from an emancipatory information systems project.

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